(FILE 'HOME' ENTERED AT 16:31:32 ON 04 DEC 2001)

FILE 'BIOSIS, EMBASE, CAPLUS, MEDLINE' ENTERED AT 16:42:48 ON 04 DEC 2001

L1	2957	S	(INTERNAL RIBOSOME ENTRY SITE SEQUENCE?) OR IRES
L2	50	S	PITSLRE PROTEIN KINASE?
L3	253	S	CELL CYCLE DEPENDENCY
L4	5	S	L1 AND L2
L5	3002	S	L1 OR L2
L6	0	S	L5 AND L3
L7	2	DUP REM	L4 (3 DUPLICATES REMOVED)

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L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2001 ACS

TI Cell cycle-regulated internal ribosome entry site of **PITSLRE protein kinase** gene, chimeric gene vectors for cell cycle-dependent translation initiation, and use in gene therapy

AB An internal ribosome entry site (**IRES**) of **PITSLRE protein kinase** gene, which is cell cycle-regulated, is disclosed. A method for cap-independent translation, or cell cycle-dependent translational initiation, using chimeric gene vectors contg. the **IRES**, and use in gene therapy, are also claimed. The current invention relates to two isoforms, p110 and p58 of **PITSLRE protein kinase**, which can be translated from the same p110 (.alpha.2-2) mRNA by an internal ribosome entry process. This means that p110 and p58, two proteins with putative different functions, are translated from a single mRNA species by using two AUGs within the same reading frame. These two proteins share the 439 C-terminal amino acids that contain the kinase domain. The **IRES** in the polycistronic p110 mRNA is the first **IRES** completely localized in the coding region of a cellular mRNA. Moreover, it was unexpectedly found that the **IRES** element is cell cycle regulated. Translation of p58 occurs in the G2/M stage of the cell cycle.

ACCESSION NUMBER: 2000:535275 CAPLUS
DOCUMENT NUMBER: 133:130823
TITLE: Cell cycle-regulated internal ribosome entry site of **PITSLRE protein kinase** gene, chimeric gene vectors for cell cycle-dependent translation initiation, and use in gene therapy
INVENTOR(S): Cornelis, Sigrid; Beyaert, Rudi
PATENT ASSIGNEE(S): Vlaams Interuniversitair Instituut voor Biotechnologie VZW, Belg.
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CODEN: PIXXD2
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1147188	A1	20011024	EP 2000-906237	20000126
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1999-200216 A 19990126
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REFERENCE COUNT: 9
REFERENCE(S):
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L7 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2001 BIOSIS DUPLICATE 1
TI Identification and characterization of a novel cell cycle-regulated internal ribosome entry site.
AB **PITSLRE protein kinases** are related to the large family of cyclin-dependent kinases. They have been proposed to act as tumor suppressor genes and have been shown to play a role in cell cycle progression. We report that two **PITSLRE protein kinase** isoforms, namely p110PITSLRE and p58PITSLRE, are translated from a single transcript by initiation at alternative in-frame AUG codons. p110PITSLRE is produced by classical cap-dependent translation, whereas p58PITSLRE results from internal initiation of translation controlled by an internal ribosome entry site (**IRES**) with unique properties. The **IRES** element is localized to the mRNA coding region, and its activity is cell cycle regulated, which permits translation of p58PITSLRE in G2/M.

ACCESSION NUMBER: 2000:266847 BIOSIS
DOCUMENT NUMBER: PREV200000266847
TITLE: Identification and characterization of a novel cell cycle-regulated internal ribosome entry site.
AUTHOR(S): Cornelis, Sigrid (1); Bruynooghe, Yanik; Denecker, Geertrui; Van Huffel, Sofie; Tinton, Sandrine; Beyaert, Rudi
CORPORATE SOURCE: (1) Department of Molecular Biology, Flanders Interuniversity Institute for Biotechnology, University of Gent, K. L. Ledeganckstraat 35, B-9000, Gent Belgium
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